

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for interfacing with a printer driver, comprising:
receiving data transmitted from the printer driver;
receiving an acknowledgment request from the printer driver, wherein the printer driver does not send further data to print until receiving an acknowledgment reply indicating that the transmitted data passed an initial check;
transmitting an acknowledgment reply to the printer driver in an asynchronous processing mode in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further data;
resynchronizing data processing operations in response to detecting an error in the received data by beginning a synchronous processing mode in which the acknowledgment reply is sent to the printer driver in response to the acknowledgment request after completing the initial check of the resent data; and
rasterizing and outputting the data.
2. (Original) The method of claim 1, wherein the received data comprises a first received data set, further comprising receiving a second data set from the printer driver after transmitting the acknowledgment reply and before completing the rasterization of the first data set.
3. (Original) The method of claim 2, wherein each received data set comprises a page of data, a portion of a page or commands to output.

4. (Original) The method of claim 2, further comprising:
buffering the second data set while the first data set is being rasterized; and
rasterizing the buffered second data set after completing the rasterization of the first data set.
5. (Original) The method of claim 2, further comprising:
concurrently rasterizing the first and second data sets with two rasterizers to rasterize in parallel the two data sets.
6. (Original) The method of claim 1, wherein the initial check is to verify that the data was received, accepted and syntax checked.
7. (Previously Presented) A method for interfacing with a printer driver, comprising:
receiving data transmitted from the printer driver;
receiving an acknowledgment request from the printer driver, wherein the printer driver does not send further data to print until receiving an acknowledgment reply indicating that the transmitted data passed an initial check;
transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further data;
detecting an error while processing the received data;
transmitting a negative acknowledgment indicating an error that causes the printer driver to resend previously transmitted data that did not output successfully; and
wherein after transmitting the negative acknowledgment, performing:
 - (i) receiving data and one acknowledgment request;
 - (ii) performing the initial check of the received data;
 - (iii) determining whether the received data is resent data; and

(iv) if the received data is resent data, then transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request after completing the initial check of the resent data; and
rasterizing and outputting the data.

8. (Original) The method of claim 7, wherein the received data comprises a page of data, wherein after transmitting the negative acknowledgment, further performing:

if the received page is not a resent page, then transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further pages.

9. (Original) The method of claim 8, wherein after transmitting the negative acknowledgment, further performing:

incrementing a counter if the received page is not a resent page;

determining whether the counter exceeds a threshold;

wherein if the received page is not a resent page, then, if the counter does not exceed the threshold, transmitting the acknowledgment reply to the printer driver after completing the initial check of the page and if the counter does exceed the threshold, then transmitting the acknowledgment reply to the printer driver before completing the initial check of the page.

10. (Canceled)

11. (Previously Presented) A system for interfacing with a printer driver, comprising:
means for receiving data transmitted from the printer driver;

means for receiving an acknowledgment request from the printer driver, wherein the printer driver does not send further data to print until receiving an acknowledgment reply indicating that the transmitted data passed an initial check;

means for transmitting an acknowledgment reply to the printer driver in an asynchronous processing mode in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further data;

means for resynchronizing data processing operations in response to detecting an error in the received data by beginning a synchronous processing mode in which the acknowledgment reply is sent to the printer driver in response to the acknowledgment request after completing the initial check of the resent data; and

means for rasterizing and outputting the data.

12. (Original) The system of claim 11, wherein the received data comprises a first received data set, further comprising means for receiving a second data set from the printer driver after transmitting the acknowledgment reply and before completing the rasterization of the first data set.

13. (Original) The system of claim 12, wherein each received data set comprises a page of data, a portion of a page or commands to output.

14. (Original) The system of claim 12, further comprising:
means for buffering the second data set while the first data set is being rasterized; and
means for rasterizing the buffered second data set after completing the rasterization of the first data set.

15. (Original) The system of claim 12, further comprising:
means for concurrently rasterizing the first and second data sets with two rasterizers to rasterize in parallel the two data sets.

16. (Original) The system of claim 11, wherein the initial check is to verify that the data was received, accepted and syntax checked.

17. (Previously Presented) A system for interfacing with a printer driver, comprising:
means for receiving data transmitted from the printer driver;
means for receiving an acknowledgment request from the printer driver, wherein the printer driver does not send further data to print until receiving an acknowledgment reply indicating that the transmitted data passed an initial check;
means for transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further data;
means for detecting an error while processing the received data;
means for transmitting a negative acknowledgment indicating an error that causes the printer driver to resend previously transmitted data that did not output successfully; and
means for performing, after transmitting the negative acknowledgment:
(i) receiving data and one acknowledgment request;
(ii) performing the initial check of the received data;
(iii) determining whether the received data is resent data; and
(iv) if the received data is resent data, then transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request after completing the initial check of the resent data; and
means for rasterizing and outputting the data.

18. (Original) The system of claim 17, wherein the received data comprises a page of data, further comprising means for performing after transmitting the negative acknowledgment:
if the received page is not a resent page, then transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further pages.

19. (Original) The system of claim 18, further comprising means for performing, after transmitting the negative acknowledgment:

incrementing a counter if the received page is not a resent page;

determining whether the counter exceeds a threshold;

wherein if the received page is not a resent page, then, if the counter does not exceed the threshold, transmitting the acknowledgment reply to the printer driver after completing the initial check of the page and if the counter does exceed the threshold, then transmitting the acknowledgment reply to the printer driver before completing the initial check of the page.

20. (Canceled)

21. (Previously Presented) An article of manufacture for interfacing with a printer driver, wherein the article of manufacture comprises code implemented in a computer readable medium to cause a processor to perform:

receiving data transmitted from the printer driver;

receiving an acknowledgment request from the printer driver, wherein the printer driver does not send further data to print until receiving an acknowledgment reply indicating that the transmitted data passed an initial check;

transmitting an acknowledgment reply to the printer driver in an asynchronous processing mode in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further data;

resynchronizing data processing operations in response to detecting an error in the received data by beginning a synchronous processing mode in which the acknowledgment reply is sent to the printer driver in response to the acknowledgment request after completing the initial check of the resent data; and

rasterizing and outputting the data.

22. (Original) The article of manufacture of claim 21, wherein the received data comprises a first received data set, wherein the code is further capable of causing the processor

to perform receiving a second data set from the printer driver after transmitting the acknowledgment reply and before completing the rasterization of the first data set.

23. (Currently Amended) The article of manufacture of claim [[21]] 22, wherein each received data set comprises a page of data, a portion of a page or commands to output.

24. (Original) The article of manufacture of claim 22, wherein the code is further capable of causing the processor to perform:

buffering the second data set while the first data set is being rasterized; and
rasterizing the buffered second data set after completing the rasterization of the first data set.

25. (Original) The article of manufacture of claim 22, wherein the code is further capable of causing the processor to perform:

concurrently rasterizing the first and second data sets with two rasterizers to rasterize in parallel the two data sets.

26. (Original) The article of manufacture of claim 21, wherein the initial check is to verify that the data was received, accepted and syntax checked.

27. (Previously Presented) An article of manufacture for interfacing with a printer driver, wherein the article of manufacture comprises code implemented in a computer readable medium to cause a processor to perform:

receiving data transmitted from the printer driver;
receiving an acknowledgment request from the printer driver, wherein the printer driver does not send further data to print until receiving an acknowledgment reply indicating that the transmitted data passed an initial check;

transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further data;

detecting an error while processing the received data;

transmitting a negative acknowledgment indicating an error that causes the printer driver to resend previously transmitted data that did not output successfully; and

wherein after transmitting the negative acknowledgment the code is further capable of causing the processor to perform:

(i) receiving data and one acknowledgment request;

(ii) performing the initial check of the received data;

(iii) determining whether the received data is resent data; and

(iv) if the received data is resent data, then transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request after completing the initial check of the resent data; and
rasterizing and outputting the data.

28. (Original) The article of manufacture of claim 27, wherein the received data comprises a page of data, wherein after transmitting the negative acknowledgment, further performing:

if the received page is not a resent page, then transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further pages.

29. (Original) The article of manufacture of claim 28, wherein the code is further capable of causing the processor to perform after transmitting the negative acknowledgment:

- incrementing a counter if the received page is not a resent page;
- determining whether the counter exceeds a threshold;

wherein if the received page is not a resent page, then, if the counter does not exceed the threshold, transmitting the acknowledgment reply to the printer driver after completing the initial check of the page and if the counter does exceed the threshold, then transmitting the acknowledgment reply to the printer driver before completing the initial check of the page.

30. (Canceled)